

The background of the cover is a detailed blue-toned illustration. It depicts a mountainous landscape with a large dam structure in the middle ground. A river flows through the scene, with a small boat visible. In the foreground, there are pine trees and a utility pole. The overall style is reminiscent of a woodblock print or a traditional Chinese ink wash painting.

CHINA

TAMES

her

RIVERS

Michael
Hannon
1973

CHINA TAMES HER RIVERS

CHINA TAMES HER RIVERS

CHINA
TAMES
her
RIVERS



1972

FOREIGN LANGUAGES PRESS • PEKING

Publisher's Note

SINCE the founding of New China, the Chinese people under the leadership of the Chinese Communist Party have been successful in their efforts to control China's principal waterways, particularly the main rivers — the Yangtse, Yellow, Huai and Haiho. This booklet contains five articles dealing with the harnessing of these four rivers. Some of the accounts have been published in *China Reconstructs* and *Peking Review*.

Printed in the People's Republic of China

Contents

A NEW CHAPTER IN TAMING THE YELLOW RIVER <i>by Huang Chun</i>	I
TWENTY YEARS WORK ON THE HUI RIVER <i>by Hung Nung</i>	15
THREE PROVINCES UNITE TO CONTROL THE HUI <i>by Chung Wen</i>	22
CONQUERING THE HAIHO <i>by Chien Wen</i>	32
WATER CONSERVATION ON THE CHIANGHAN PLAIN <i>by Chung Chien</i>	43

by Huang Chun

A New Chapter in Taming the Yellow River

ORIGINATING in the Bayan Kara Mountains on the Chinghai-Tibet Plateau, the Yellow River, China's second longest river, flows 4,845 kilometres winding its way eastward and emptying into Pohai Bay. It goes through Chinghai Province, Kansu Province, the Ningsia Hui Autonomous Region, the Inner Mongolian Autonomous Region, and the provinces of Shensi, Shansi, Honan and Shantung. The Yellow River basin covers 745,000 square kilometres.

The Yellow River valley was the political and economic centre of the country and the cradle of a splendid culture for quite a long time. It is still an important area today when China is engaged in socialist

The author, an engineer on the Yellow River Water Conservancy Committee, has taken part in the work to harness the river for more than 20 years.

revolution and construction. There are 300 million *mu*¹ of farmland and 110 million inhabitants in the vast valley region on the upper and middle reaches and in the areas along the lower reaches of the river. The rich water resources of the Yellow River and its tributaries are valuable in the building of our socialist motherland.

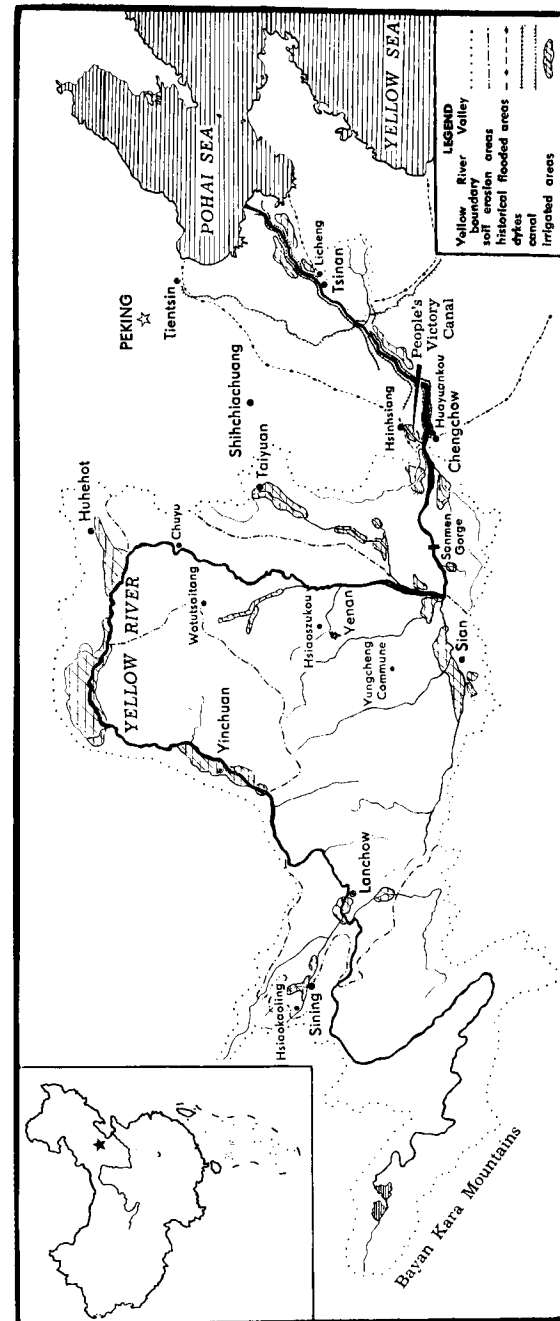
However, during the long years of reactionary rule under the feudal dynasties and the Kuomintang the Yellow River could not be harnessed and developed. Soil erosion, flood and drought in the river basin were unchecked. Because the river had brought untold suffering to the Chinese people, it was known abroad as a harmful river. In their efforts to cover up the brutality and impotence of the reactionary classes and to hoodwink the people, some decadent, reactionary bourgeois "specialists" prophesied that soil erosion in the Yellow River basin was "permanent" and "could not be changed", and that "the North China Plain would also become deserts in the near future".

Led by the great leader Chairman Mao and the Communist Party, the Chinese people overthrew imperialism, feudalism and bureaucrat-capitalism, which lay like three big mountains on them, and became masters of their country.

Chairman Mao has always shown deep concern for harnessing the river and inspected areas along it many times. As early as 1952 when China was rehabilitating its national economy, he issued the call "**Work on the Yellow River must be done well**". This reflected the desire of the more than 100 million people in the river

¹ One *mu* is equal to one-fifteenth of a hectare.

SKETCH MAP OF THE YELLOW RIVER



basin, expressed the great determination of the Chinese people to conquer the river and marked an entirely new stage in harnessing the river.

Notable achievements have been made as a result of this call and by relying on the masses, proceeding from agricultural development, carrying forward the revolutionary spirit of self-reliance and hard struggle and using materialist dialectics to understand and transform the river.

The people have defeated floodwaters on the lower reaches for more than 20 years running and reversed the dangerous situation in pre-liberation days when the river overflowed the banks two years out of three. Enormous soil conservation work was done on the upper and middle reaches where soil erosion ran wild. Sanmenhsia and four other big key water conservancy projects were built on the river's main course and a group of big, medium and small reservoirs were completed on its tributaries. Non-existent before liberation, hydro-electric power stations are supplying electricity to industry and agriculture. Irrigated land in the basin exceeds 44 million *mu*, 3.7 times as much as before liberation. Compared with 1949, grain and cotton output in the entire valley increased 79 and 137 per cent last year.

These achievements are great victories for the Chinese people who have mastered Mao Tsetung Thought and implemented Chairman Mao's revolutionary line. The profound changes have shattered the ravings of reactionary bourgeois "specialists" and eloquently showed that the Chinese people are able to conquer the Yellow River.

The course of harnessing and conquering the Yellow River was not one of plain sailing. The renegade, hidden traitor and scab Liu Shao-chi and his gang continuously interfered in the work by pushing the counter-revolutionary revisionist line in harnessing the river. The focus of the struggle between the two lines has always been putting proletarian politics in command and relying on the masses to harness the Yellow River, or putting vocational work in command and relying on specialists. Guided by Chairman Mao's revolutionary line, the masses firmly fought Liu Shao-chi's counter-revolutionary revisionist line and guaranteed that the work of harnessing the Yellow River advanced along the correct road.

■ Defeating Floods

The biggest damages brought by the Yellow River in the past were the floods on its lower reaches. Carrying huge amounts of silt downstream, the river continuously choked up its bed on the lower reaches so that it is higher than the ground. Generally this section is three or four metres above the ground and in certain places as high as ten metres. It relies entirely on the dykes to hold the floodwaters. Because the reactionary ruling classes in the past ignored the people's safety, the dykes were low and full of defects and gave way whenever there were fairly big floodwaters.

According to statistics, there were more than 1,500 dyke breaches on the lower reaches of the Yellow River and 26 major changes in its course in some 2,000 years before liberation. The floods affected Tientsin in

the north and the Huai River in the south, spreading over an area of 250,000 square kilometres. This seriously threatened the safety of about 100 million people in the Haiho and Huai valleys. Whenever the Yellow River overflowed or changed course, it caused tremendous losses in lives and property. For instance, when the river broke its dykes in 1933 it flooded an area of 12,000 square kilometres embracing 67 counties in the three provinces of Hopei, Shantung and Honan. The flood affected 3,640,000 people and took 18,000 lives.

The vicious reactionaries often used the Yellow River as an instrument to slaughter the people and maintain their reactionary rule. They deliberately created disasters by breaking the dykes and making the river change course. Adopting a policy of non-resistance towards the aggression of Japanese imperialism, the Kuomintang and Chiang Kai-shek went out of their way to break the Yellow River dyke at Huayuankou near Chengchow, Honan Province, in 1938 in order to cover their flight. This made the river change course to the south and flooded 54,000 square kilometres of land in 44 counties in eastern Honan, northern Anhwei and northern Kiangsu. A total of 12.5 million people were affected and 890,000 of them died. In addition, it created the vast silt-covered desolate stretches of land known as the flooded Yellow River region.

Led by the Party and relying on the masses, the battle against floods on the lower reaches started in 1946 when the Chinese people had just won their victory in the anti-Japanese war. The Kuomintang and Chiang Kai-shek supported by U.S. imperialism launched an all-out attack against the liberated areas. To co-ordinate

with their military actions, they hurriedly sealed the dyke at Huayuankou, at the same time sabotaging work to repair the old dykes in the liberated areas under the pretext of "diverting the Yellow River to the old channel". What they really wanted was to use water in place of soldiers to divide and flood the Hopei-Shantung-Honan and Pohai Liberated Areas in the river's old channel and along its banks.

Responding to the Party Central Committee's militant call "Opposing Chiang Kai-shek and harnessing the Yellow River", heroic armymen and civilians in the liberated areas, rifle in one hand and spade in the other, rose up to battle valiantly against the enemy and floodwaters in the revolutionary spirit of daring to struggle and daring to win. The Yellow River dykes needed rebuilding, so millions of people took up the job. Everybody contributed his share to solve the shortage of raw materials and the people provided 150,000 cubic metres of stone and large numbers of bricks in a short period. While organizing resistance to bombings by enemy planes and the enemy's military attacks, the armymen and civilians raced against time to build mattress revetments to protect the dykes. After indomitable struggles, they finally controlled the floods of 1947 and 1948 and won victories in battling Chiang Kai-shek and the Yellow River. This was a brilliant overture to the work of harnessing the river.

Under the leadership of the Party, the people along the lower reaches set out on the enormous job of repairing dykes and preventing floods after liberation. In more than 20 years they have repaired and reinforced

1,800 kilometres of dykes and changed some 5,000 sections of mattress revetments into stone ones. This involved 350 million cubic metres of earthwork and more than 9 million cubic metres of stonework. The big dykes extending hundreds of kilometres along the river took on a new look and became the reliable material base for conquering Yellow River floods.

But controlling the floods depends not merely on dykes. It depends primarily on the wisdom and strength of the millions of people along the banks of the river. Big floodwaters rarely known before occurred on the lower reaches in 1958 and in most places the water level exceeded the height by which the dykes could safely confine the waters. The situation was especially dangerous near Tsinan, Shantung Province, where the floodwaters were only half a metre below the dykes. Led by the Party, two million armymen and civilians rushed to the banks and heroically declared: "As long as we are here the dykes stand firm; the water rises, so will the dykes." In one day and night they built 600 kilometres of small dykes on the main dykes. They finally defeated the floodwaters and ensured the safety of the nearby areas.

Chairman Mao has taught us: **"What is a true bastion of iron? It is the masses, the millions upon millions of people who genuinely and sincerely support the revolution."** The living fact of continuously harnessing the Yellow River floodwaters in the past 24 years eloquently proves this teaching to be an incontestable truth. It also convincingly proclaims the bankruptcy of "relying on specialists to harness the Yellow River", a revisionist line pushed by Liu Shao-chi and his gang.

■ Checking Soil Erosion

The upper and middle reaches of the Yellow River contain the world's largest loess highland which covers 430,000 square kilometres. Criss-crossed by numerous gullies, this area of rolling hills has loose soil but little vegetation. After a storm, rain-water carried away large quantities of top soil. A total of 1,600 million tons of silt was carried down from this area to the lower reaches each year and the volume added up to some 1,100 million cubic metres. If this silt was built into a dyke one metre high and one metre wide, it would be long enough to circle the equator 27 times. The loss of such a huge amount of silt each year reduced the cultivated areas, diminished soil fertility, aggravated drought and lowered farm production in the regions along the upper and middle reaches. Moreover, the enormous quantity of silt flowing down to the lower reaches steadily raised the river bed in this section and often caused serious floods. Therefore, checking soil erosion is not only necessary for transforming the poor and backward state in the affected areas, but the foundation for harnessing the Yellow River permanently.

Acting according to Chairman Mao's instruction "**Attention must be paid to soil conservation**", the working people have since liberation criticized the idea that "soil erosion cannot be changed" — an idea cherished by the cowardly and the lazy. With the revolutionary heroism of "**transforming China in the spirit of the Foolish Old Man who removed the mountains**", they set out dauntlessly to remake the desolate mountains and gullies and this mass movement has seen one upsurge after another.

In the course of transforming nature, the masses resisted the interference of the counter-revolutionary revisionist line, including "material incentives", pushed by Liu Shao-chi and his like. Persistently relying on the collective economy and combining the method of building engineering works with raising trees and sowing grass, they undertook concentrated, continuous and long-term transformation of hilltops and gullies one by one. A whole series of successful experience has been created. This includes building terraced fields on mountain slopes, damming gullies to silt up land, improving soil and creating farmland on river flats with the aid of silt from mountain floods and planting trees and grass on steep slopes and desolate mountains. Soil erosion has been effectively checked wherever such measures were adopted. They thus promoted farming and contributed to harnessing the Yellow River. On the vast loess highland today there are many advanced units which have changed their unfavourable natural conditions.

Shansi Province's Chuyu Brigade is an example. With the Yellow River in front and hills behind, it has over 400 households with more than 2,000 people; its nearly 20,000 *mu* of land are scattered over three ridges, 12 gullies, a stretch of river flats and a dozen hills. Soil erosion here was very serious. Before liberation, the brigade was hit by flood, drought and other natural disasters nine years out of ten. As soon as they set up their elementary agricultural co-ops in 1952, the poor and lower-middle peasants began concentrating on soil conservation. In the spirit of the Foolish Old Man who removed the mountains, they have been digging every day for almost 20 years. Because they lacked experience

at first, the dams built were washed away by mountain floods. Refusing to be discouraged or retreat, they summed up their experience and carried on their work. Aware that the saplings on the hills were in danger of withering, they carried water from the Yellow River to water them.

After a long period of hard work, they finally transformed over 4,000 *mu* of sand-stone river-bed into fields giving high stable yields. They built 370 earth-stone dams in the 12 gullies, terraced more than 1,500 *mu* of fields on the slopes, planted over 10,000 *mu* with trees and some 2,200 *mu* with grass, forming a 5-kilometre-long and 20-metre-wide shelter belt along the banks, and built a pumping station. Now the Chuyu Brigade is covered with abundant vegetation and has achieved all-round development in agriculture, forestry, animal husbandry and side-occupations. The per-*mu* yield of grain has jumped from 50 or 60 *jin*¹ before liberation to some 520 *jin* while that of sorghum has hit 1,990 *jin*. Gone for ever are the days when the brigade was subjected to soil erosion and low yields caused by frequent natural disasters.

There are many other advanced units like the Chuyu Brigade. After a 15-year-long battle the Hsiaokaoling Brigade on the Chinghai Plateau has successfully checked soil erosion over 80 per cent of its land, with the result that it has registered a per-*mu* grain yield three times as much as before. The Yungcheng Commune in Kansu Province has terraced and afforested all the nearby barren mountains and gullies in six years. The Hsiao-

¹ One *jin* is equal to half a kilogramme.

szekou Brigade in the vicinity of Yen-an, which has only 27 households, has built 27 dams to silt up land, converting the hitherto desolate gullies into granaries.

■ Turning the Harmful into the Beneficial

Before liberation, there was a saying: "Benefiting the Hotao Plain alone, the Yellow River brings much harm to other areas."¹ For thousands of years, the Yellow River waters had only been used to irrigate farmland on the Hotao Plain between Ningsia and the Inner Mongolian Autonomous Region; it brought nothing but flood disasters to people living along its lower reaches.

While winning victories in their struggle to control the floods and improve the soil since nationwide liberation, the people have gone all out to divert Yellow River water to irrigate farmland and develop hydro-electric power works. Now more than 40 million *mu* of farmland on the upper and lower reaches are irrigated by the river water and electric power is supplied to industrial and agricultural production. In order to explore ways of using water resources on the lower Yellow River, the people in 1951 built the People's Victory Canal, the first big project to divert the Yellow River water to irrigate the farmland on its lower reaches in the Hsinhsiung Region of Honan Province. The canal runs through a plain covering six counties and cities on the northern bank of the Yellow River. It is located at the old Yellow

¹ Taken as a whole, the two plains between the Holan Mountains and the Yellow River in Ningsia on the upper reaches of the river and between the Wuchia and Yellow Rivers in Inner Mongolia are called the Hotao Plain.

River course. Seriously jeopardized by drought, waterlogging and alkali, farming here was very backward. In 1952 when this canal was initially completed and put into service, Chairman Mao went there on an inspection and issued important instructions which greatly encouraged the people in the irrigated areas. Having resisted obstruction by the revisionist line of Liu Shao-chi and company over the past decade or so, the working people in the irrigated area, upholding the spirit of enterprise and hard struggle, dug a network of irrigation and drainage canals with a total length of 7,500 kilometres, built large numbers of sluice-gates and culverts and sunk over 2,500 power-operated wells, thus basically meeting the demands of "ensuring irrigation in times of drought and drainage in times of waterlogging".

Applying the concept of "everything divides into two" in practice, they analysed the dual character of the river's silt. They saw both the unfavourable aspect — too much silt would choke the canals — and the favourable aspect — the silt could be used to improve the soil. In a planned way, they first directed the river water into the low-lying sandy land to let most of the silt precipitate and then channelled the water into the canals to irrigate farmland. In this way, they not only reduced the amount of silt blocking the canals but also transformed large tracts of barren alkaline land into fertile fields and turned harmful silt into something beneficial. The irrigated area of the People's Victory Canal has now expanded from the originally planned 400,000 *mu* to 600,000 *mu* and average per-*mu* grain yield in the whole irrigated areas has shot up from 70 or 80 *jin* before liber-

ation to over 470 *jin* and average per-*mu* cotton yield from 10 or 20 *jin* to 105 *jin*.

The completion of the People's Victory Canal has been a big advance in the work to divert water from the lower Yellow River to irrigate farmland. Now more than 40 culverts and sluice-gates and some 100 syphon-projects, which irrigate over 4 million *mu* of farmland, have been built along the banks on the lower reaches. In addition, people have gathered new experience in turning the harmful into the beneficial by skilful use of water conservancy works.

The Huayuankou Commune on the northern outskirts of Chengchow City in Honan Province is located in a place inundated by the Kuomintang reactionaries' sabotage in 1938 when they made a breach in the Yellow River dyke. After the flood abated, the site became a sandy desert, with stretches of alkaline and swamp land and pools. During the high water season, the whole embankment was under water which made it difficult to combat flood. In ordinary times, the place was affected by drought, waterlogging, alkali and sandstorms and farm production was low. Thanks to the concern of the Party and the People's Government after liberation, the poor and lower-middle peasants built waterlocks and canals and channelled the Yellow River water to irrigate farmland. Within a few years, they were using the river silt to improve 40,000 *mu* of land. The quickly silted-up 13-metre-deep pool behind the dyke was turned into 2,500 *mu* of fertile land and the embankment's flood-control ability was greatly raised. The commune's average per-*mu* grain yield in 1970 was nearly five times as much as in the early days after liberation.

The success in harnessing the Yellow River over the past 20 years or so is only the first step in a long, long march. Advancing along Chairman Mao's proletarian revolutionary line, the people living in the Yellow River valley are continuing their efforts to harness it further.

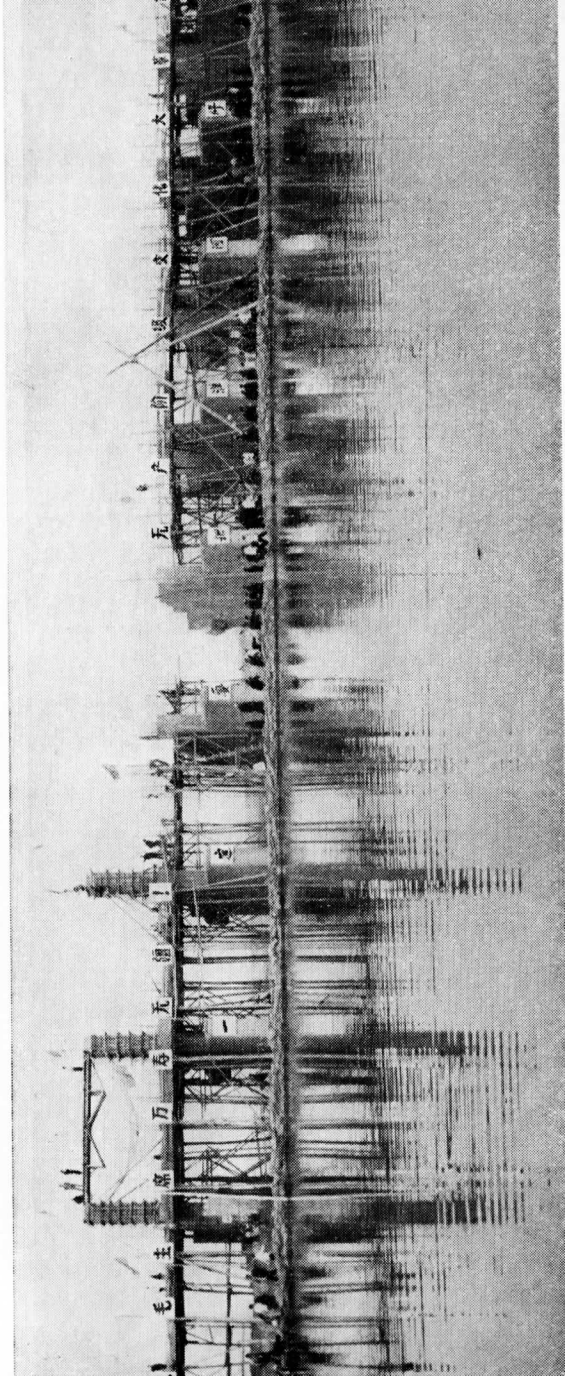


The People's Victory Canal in Honan Province — a pioneering project to draw water from the lower reaches of the Yellow River for irrigation

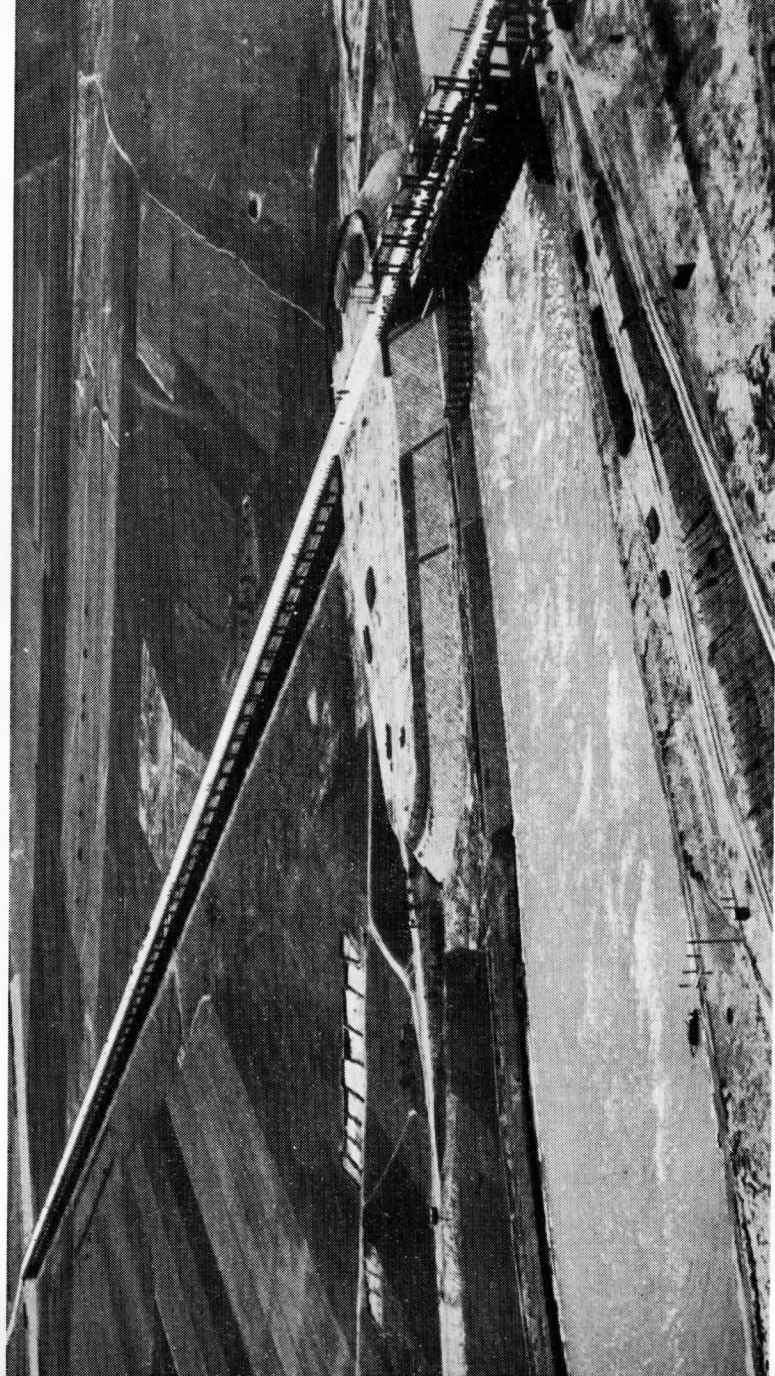


Wheat grows well as the members of the Chilying Commune, Honan, make good use of the Yellow River for irrigation

Honan peasants join in dredging the To River in Anhwei Province



The distribution gate at Suhsien in the middle Huai River region under construction

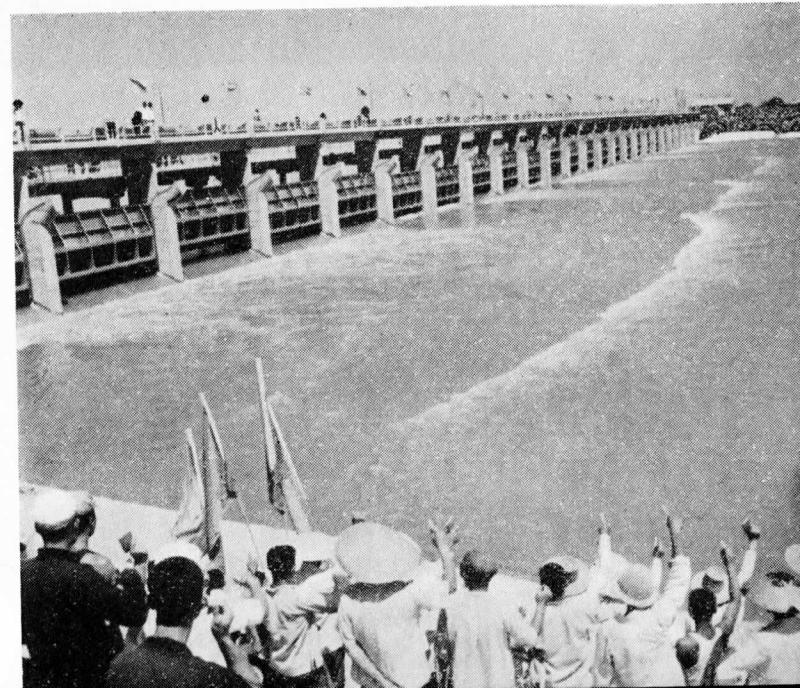


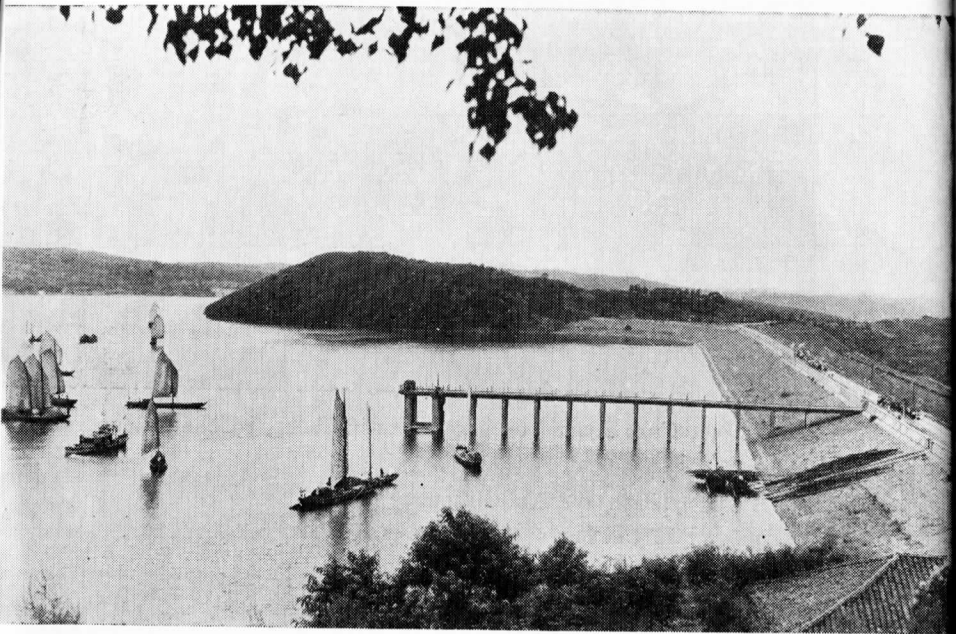
The 143-kilometre-long New Tzuya Canal, one of the key projects for the permanent control of the Haiho River



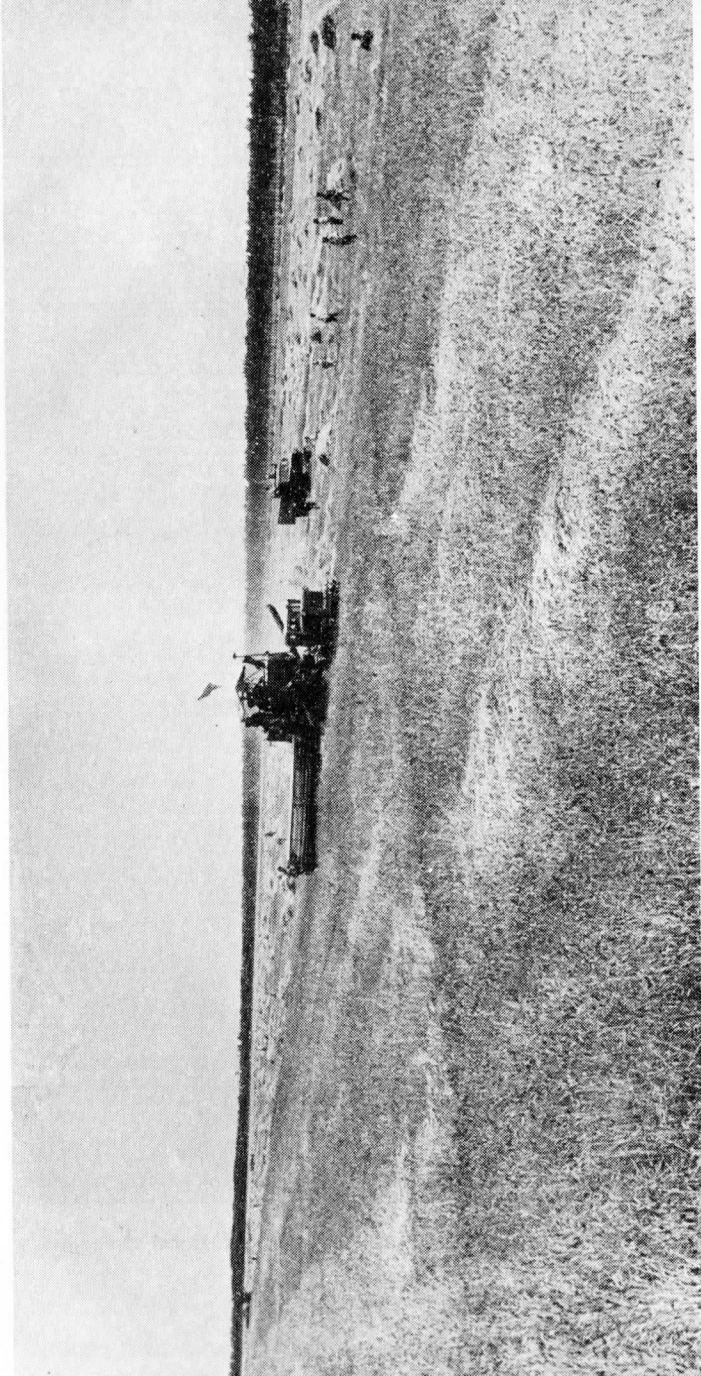
The "Tiger Cubs Squad" on a worksite in Tacheng County, Hopei

At its completion the Tsaolinchuang flood distribution gate in the Heilungkang area releases water





Part of the Red Guard Reservoir



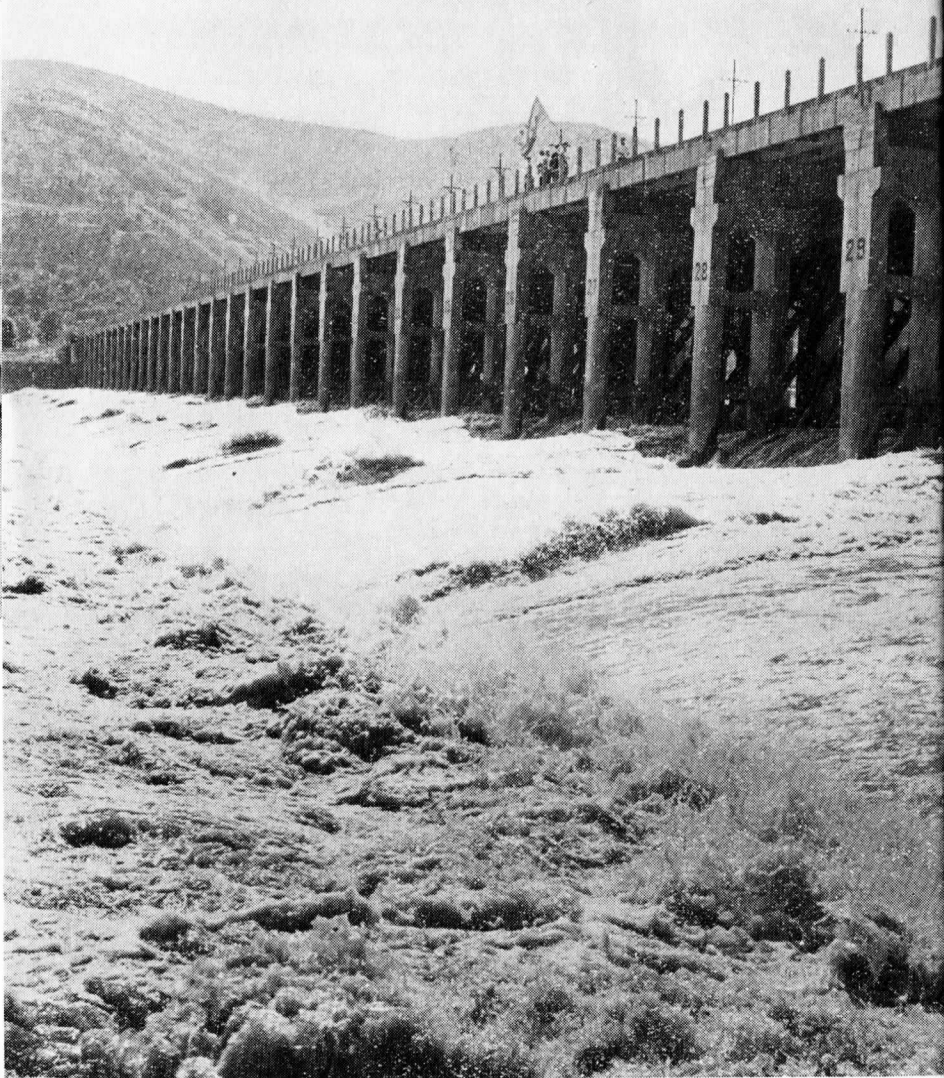
A rich wheat harvest on the Chianghan Plain

by Hung Nung

Twenty Years Work on the Huai River

THE Chinese people's great leader Chairman Mao Tsetung issued his great call, "**The Huai River must be harnessed**", in May 1951. Under its guidance the people in the Huai River basin have, in the past two decades, waged a "people's war" to tame it. Now the Huai, for centuries a scourge to the people, is safeguarded against flood and waterlogging, and the irrigated area has grown rapidly. Tremendous changes have taken place in agriculture. Hydro-electric power stations have gone up and water transport has increased.

The Huai is one of China's major waterways, along with the Yangtse and Yellow Rivers, and is more than 1,000 kilometres long. Its basin is in the heart of China. Originating in the Tungpo Mountains of Honan Province in central China, it passes through Honan, Anhwei, Kiangsu and part of Shantung Provinces. Its tributaries and lakes linked with it are numerous. Along the banks



The Huangshantou distribution gate of the Ching River flood diversion project

is fertile land which produces wheat, beans, *kaoliang*, rice and other crops, making this an important agricultural area.

However, because the reactionary ruling classes before liberation did not take effective measures, heavy rain would bring floods, light rain caused waterlogging and no rain meant drought. The peasants lived in misery. In the 2,000 years from 246 B.C. to A.D. 1948, there were more than 900 floods and as many droughts.

After liberation, Chairman Mao, with great revolutionary foresight, made the important decision in 1951 to control the Huai River and issued his great call "**The Huai River must be harnessed**". This call encouraged millions of the Chinese people to combat natural disasters and transform nature, and a large-scale "people's war" started soon after to harness the river.

In the past 20 years, the people in the Huai River valley have had the guidance of Chairman Mao's revolutionary line and relied on collective effort. They completed a number of water and soil conservation projects in the mountainous areas and built many reservoirs and a number of water detention works to control the lakes on the plain. They dug new outlets and enlarged the existing ones in the lower reaches, and built and repaired many dykes and also built a number of irrigation and drainage works to meet the needs of expanding agriculture. These helped extend the irrigated area and quickly increased grain and cotton output.

In Honan Province, where 60 per cent of the land is drained by the upper reaches of the Huai, commune members have, in the past two decades, dredged more

than 20 rivers, built a number of reservoirs, and dug ponds and pump-wells, bringing floods in the mountainous areas under partial control and giving form to a drainage system on the plain in addition to irrigation. This initially improved silted-up river beds, put the river system in order, helped reduce waterlogging and drought and promoted agriculture.

Four big, and a large number of small and medium-sized reservoirs as well as canals linking them have been built in Anhwei Province where 32 counties and cities and nearly two-thirds of the farmland lie in the river basin. The province has also built the gigantic Pi-Shih-Hang irrigation project and the big man-made New Pien River. The dyke on the northern bank of the Huai has been strengthened and many water detention projects and pumping stations added to regulate the flow of the river and bring water to irrigate farmland.

In neighbouring Kiangsu Province, the lower reaches of four rivers, the Huai, Yi, Shu and Szushui, drain a vast area in the northern part of the province. The people in this region have completed a project to control the Shu and dug high-water outlets for the Yi, Shu and Szushui. They have dug the north Kiangsu trunk irrigation canal and made a new outlet for the Huai to empty into the sea. Meanwhile, the dykes along rivers, lakes and the coast have been strengthened, a large number of sluices, water diversion and detention projects and pumping stations built, old waterways dredged and new irrigation and drainage canals added. The first stage of the project leading the Huai into the Yangtse has been completed. All this has in the main brought under con-

trol the four waterways of the Huai system in the northern part of the province.

The people in the southwestern and western part of Shantung Province living in the Huai basin have dredged the Wanfu, Chushui and Chaowang Rivers and dug two new waterways to increase the region's flood prevention and drainage capacity. Along the upper reaches of the Yi, Shu, Wen and Szushui Rivers, large-scale soil conservation projects, terraced fields and reservoirs have been built, while along the middle and lower reaches of these rivers large tracts of well-irrigated fields have been created to ensure stable, high yields free from the menace of excessive rain or drought. In the southern part of the province, more than 2,000 canals have been dug.

These projects undertaken since liberation have strengthened the region's ability to resist floods, water-logging and drought and brought irrigation to vast areas. Constant flooding of the tributaries along the upper reaches of the Huai has been virtually checked, while the main dykes along the lower reaches have stood firm all these years.

The people in the basin have also done much deep ploughing and soil improvement, fought against salinity and built major projects in the fields to extend the acreage that provides stable, high yields. The total output of grain in the basin has increased by a big margin and that of cotton more than doubled, compared with the early days after the founding of the People's Republic of China. In all, 26 counties and cities, 520 communes and 12,700 production brigades have topped the targets set for grain production in the National Programme for

Agricultural Development. There has also been a rapid expansion of other undertakings in the countryside.

There was a fierce struggle between the two lines in the past two decades on the question of harnessing the Huai. In warm response to Chairman Mao's great call, the masses of revolutionary people in the Huai basin have displayed the revolutionary spirit of self-reliance and hard work and resolutely struggled against the renegade, hidden traitor and scab Liu Shao-chi who pushed a counter-revolutionary revisionist line in water conservancy work by advocating such fallacies as "let specialists be in charge of water conservancy work" and "put technique first". Their struggle ensured one victory after another in the work of controlling the Huai. In the Great Proletarian Cultural Revolution, Liu Shao-chi's bourgeois headquarters was smashed and the socialist enthusiasm of the revolutionary people reached a new high. This gave rise to a new upsurge in the Huai River harnessing work, and new and still greater victories than those before the Cultural Revolution have been won.

The Lichiachai Production Brigade in Chunan County, Shantung Province, typifies the mass movement to harness the Huai in accordance with Chairman Mao's instructions. Situated in dry, sandy hills, Lichiachai started to transform the hills and build irrigation projects after agricultural co-operation in 1953. This brought about tremendous changes, and by 1956 Lichiachai's grain yield already exceeded the target set in the National Programme for Agricultural Development. In 1957, Chairman Mao praised the spirit of the people of Lichiachai in his directive, **"Transform China in the spirit of**

the Foolish Old Man who removed the mountains. Lichiachai is a good example." Chairman Mao thus named Lichiachai as a pace-setter in the work of controlling the Huai.

Inspired by this, the people in the Huai River basin began a new high tide in the mass movement to harness the Huai River. The Pi-Shih-Hang irrigation project in Anhwei Province started in 1958 is a big project in the area which shows the people's revolutionary spirit of self-reliance and hard struggle. The project put stress on irrigation, and was to use the water resources on the east side of Tapieh Mountains and the water stored in five new reservoirs built in the province to irrigate farmland in nine counties and two cities in the area. In addition, the project would solve the water deficiency of the Huai River in times of drought. People could also use the water to power many small and medium hydro-electric stations. By 1965, the sluice-gates at the head of the canals of the project were in the main completed, and also part of the work on the trunk and branch canals, while a number of pumping stations and hydro-electric power stations were in operation. The irrigated area grew to more than 200,000 hectares. The potential strength of the revolutionary masses to transform nature was galvanized in the Great Proletarian Cultural Revolution, and the project progressed speedily. The masses built or expanded seven main canals and five long aqueducts, as well as a large number of small irrigation works. The main part of the Pi-Shih-Hang irrigation project was completed by the end of 1970 with the irrigated area reaching 530,000 hectares, 2.5 times that in 1965. As a result, agricultural production is rising.

The people in the Huai River basin are now speeding up the water conservancy works in the mass movement to learn from Tachai, so as to thoroughly transform the Huai from a scourge into a blessing.

by Chung Wen

Three Provinces Unite to Control the Huai

THE Huaifei Plain stretches across the three provinces of Honan, Anhwei and Kiangsu. Twenty-three years ago, one of the three decisive campaigns of the War of Liberation, the Huai-Hai campaign, was fought here. During this campaign the people of the three provinces worked solidly together to support the Chinese People's Liberation Army in wiping out over half a million Kuomintang troops. Twenty-two years later, in the Great Proletarian Cultural Revolution, the people carried this revolutionary tradition forward, used Mao Tsetung Thought in the construction of a system to control water and created a shining example of unity.

In four winters and three springs beginning in 1966, over 450,000 peasants dug a 250-kilometre canal which starts in eastern Honan, flows through northern Anhwei and empties into Hungtse Lake in Kiangsu Province. During the flood season, it diverts the water from 14

counties of the Huai River basin into the lake. It frees 15,000,000 *mu* of farmland from flood and waterlogging, expands shipping, electric irrigation and drainage on the Huaifei Plain.

■ Harness the Huai!

The water of the Huaifei Plain drains mainly through the Huai River and its tributaries, the To and others. Before liberation these waterways were long in disrepair and flood was a constant menace. During the anti-Japanese war (1937-45), Kuomintang troops, fleeing from the Japanese invaders bearing down on Honan, utterly disregarded the lives and property of the people and breached the southern dyke of the Yellow River in an attempt to check the pursuers. The Yellow River poured south into the Huai and To Rivers, choking them up with silt. Since then, a big rain on the Huaifei Plain meant big disaster, a small rain meant small disaster, and no rain meant drought.

In 1951 Chairman Mao issued the call, "**The Huai River must be harnessed.**" The principle: unite to control water. The policies: overall planning, taking the interests of the whole into account, and paying attention to both storage and drainage. Guided by Mao Tsetung Thought, the people of the three provinces went all out to build water conservation projects, renovate and control the Huai and its main tributaries.

But in 1958 Liu Shao-chi, the big renegade, came to the Huaifei Plain and imposed ideas contrary to Chairman Mao's principle of uniting to control water.

Brushing aside local natural conditions, he insisted on emphasizing the conservation of water in each locality. He instructed that each province, county — even commune and production brigade — should erect its own dykes around its low-lying land and build dams on its own section of the rivers. Actually he was making everyone use his neighbour's fields as an outlet for his overflow. This was intended to break up the unified water system on the Huaipei Plain, wreck the progress already made, create feuds over water, and disrupt the unity of the people of the three provinces.

During the Cultural Revolution, the people rose and repudiated this counter-revolutionary revisionist line. Determined to practise Chairman Mao's policies on uniting to control water more effectively, they made plans for an immense project — a new canal to completely solve the problem of draining water on the entire Huaipei Plain.

The project consisted of two parts. One was to dredge the upper reaches of the To River, mainly in Honan, and to make it 114 kilometres long and 50 to 70 metres wide. The other part, mainly in Anhwei, was to dig a new 136-kilometre canal 4 to 5 metres deep and 350 to 600 metres wide. Called the New Pien River, it would connect the upper reaches of the To River with Hungtse Lake.

■ Taking the Heavy Loads

The Suhsien Special Administrative Area in Anhwei Province was responsible for dredging 48 kilometres of the To River and digging all 136 kilometres of the New

Pien River. In the beginning, some Suhsien people were for dredging the To River first because this would quickly solve the area's own drainage problems. But the masses of Suhsien's people wanted to dig the new canal first because this would provide new drainage and reduce the danger of flood for the people of Shangchiu upstream in Honan Province. "What's this about whether you benefit first or I?" they demanded. "Benefiting the entire cause of socialist construction and the people of all three provinces is the only benefit."

Acting on the people's opinions, the Anhwei Province water conservation headquarters decided to dig the New Pien River first and organized 300,000 commune members for the job.

The new river had to cut 7 kilometres through a hill 25 metres high in Szuhsien County. Headquarters decided that all nine counties in the area should send commune members to help. But Szuhsien's peasants, following Chairman Mao's teaching of **carrying the heavy loads**, volunteered to dig through the highest section of the hill. All the county's building teams fought for the hardest tasks. The Red Flag Team of 105 strapping young men volunteered for the job of digging 19,000 cubic metres of earth.

The greyish hill was almost as hard as concrete. Only a few strokes curled up the point of a 4-kilogramme iron pick. The team tried having two people push one shovel down with their feet. Each push only brought up a fist-size piece. But they kept stubbornly on. As they dug lower, the sides of their cut became so high and steep that it was difficult to haul the earth up by

hand. But there were not enough electric haulers to go around. The team members told each other, "Let the other teams use the electric haulers, we'll think of some other way." They made six hand-haulers using their pushcart wheels as pulleys and then proposed a revolutionary emulation drive with the teams using the electric haulers. "Years ago we defeated the Kuomintang reactionaries with millet plus rifles," they said. "Now we are going to cut through this little hill with shovels plus homemade haulers." Digging shovelful by shovelful, hauling cart by cart, with a will like the Foolish Old Man who removed the mountains, the united canal builders cut through the hill in three winters' time, sooner than planned.

■ Thinking of the Whole

For a long time the people of the Shangchiu area in Honan Province had wanted to dredge and deepen the upper reaches of the To River, but had never done it because there would be no adequate outlet for the increased flow. Yet when work on the New Pien River began, instead of starting on their own river, they sent their builders to neighbouring Anhwei Province to help with the new canal, a much heavier task. Like the time during the Huai-Hai campaign when everyone supported the front, now everyone fought to go to Anhwei.

Chiehkou Commune's 60-year-old Chao Cheng-tien, deeply oppressed in the old society, put in several requests to go. "Unite to control water is Chairman Mao's call," the old man said. "It's only 100 kilometres to Anhwei

Province—nothing compared to the distance Norman Bethune travelled from Canada to China to help us fight the Japanese invaders. We're controlling water for a common revolutionary aim. I must go." Throughout the journey to Suhsien in Anhwei, he marched at the head of the contingent, Chairman Mao's quotation book in his pocket and a shovel over his shoulder. More than 100,000 people from Honan Province worked for a whole winter in Anhwei Province, digging 6,500,000 cubic metres of earth before going back to their own province to start dredging the To River.

In the spring of 1969 when their work on the To River was nearing completion, there was a sudden heavy downpour. The high water created tremendous difficulties. But the Honan peasants' first thought was for the 300,000 builders downstream on the New Pien River site in Anhwei Province. Racing with time, they erected a dam across the To River to hold the water in their own area and make the work of the Anhwei builders easier, even though they themselves had to pump twice as much water and dig in the water.

Again, in the latter part of April, a heavy rain fell for several days, and this time the flood water tore a 25-metre breach in the dam. "Save the dam!" cried the Honan peasants. "Protect our class brothers in Anhwei so they can work in safety!" In torrential rain, around the clock, a 2,000-man shock team worked chest-deep in the water to mend the breach. The rain did not let up, and more dams were put up along the river to divert the rising water. In no time, all the waterways in the Shangchiu area were full, threatening to drown tens of thousands of *mu* of ripening wheat and some villages.

When the Anhwei peasant-builders learned of this, they promptly sent representatives to Honan to insist that the Honan people open the big dam and save their homes and crops. Finally they agreed. The flood, now at its peak, rushed through the unfinished canal into Hungtse Lake at 300 cubic metres of water per second. Although the Anhwei builders had to stop work for 20 days, the wheat and villages of Honan were saved. The story, shining with communist spirit, quickly spread through the worksites on the Huaipei Plain, inspiring greater unity.

Another example of self-sacrifice and cooperation was how the people of Szuhung, armed with Mao Tsetung Thought, subjected their local interests to the interests of the whole. Szuhung lies close to Hungtse Lake. For the canal, they would have to give up 20,000 *mu* of land, move whole villages to new sites and erect dykes calling for 5,000,000 cubic metres of earth around tens of thousands of *mu* of low-lying land close to the canal outlet. The Szuhung people readily set to work.

The canal had to run through a village of 23 families, home of the Luchuang Production Team. Without hesitation, the villagers dismantled 120 houses and buildings and moved them to a new site. "Chairman Mao teaches us **to take the interest of the whole into account,**" they said. "To wipe out the flood menace for our class brothers in three provinces, support the building of socialism and the world revolution, we will willingly give our lives, let alone some houses."

On a tract of wasteland men and women, old and young quickly built a row of new houses and reclaimed 300 *mu* of land. The following year, 1967, they were

again self-sufficient in grain and the year after they had surplus to sell to the state.

Szuhung County organized 20,000 peasants for their part of the great project. In three years they erected 11 dykes and built 13 electric irrigation stations, turning Szuhung into an area which would yield stable harvests in spite of drought and waterlogging.

■ Uproot Revisionism, Deepen Unity

All the worksites of the new canal became meeting places where the people lashed out at Liu Shao-chi for disrupting water control with his revisionist ideas. Wall newspapers appeared on dykes, river banks and temporary living quarters. The deeper the repudiation, the closer the unity.

The Kaochuang Commune of Honan and the Tiehfo Commune of Anhwei were separated only by a stream. In the years of the revolutionary war, the poor and lower-middle peasants on both sides of the stream fought as guerrillas, struggled against landlords and carried out land reform together. During the Huai-Hai battles, many of them were in the same transport and stretcher-bearer teams. But Liu Shao-chi's proposal that the counties, communes and brigades conserve their own water influenced the two communes and each concentrated on its own projects. Tiehfo Commune built its own waterlock and dam. During the flood season, water was held back by the lock and could not flow into Kaochuang's fields. So the Kaochuang peasants went and broke open

the lock and dam. This angered the Tiehfo people. For a number of years the two communes feuded.

This time, the two communes held a joint repudiation meeting to denounce Liu Shao-chi's revisionist ideas, digging up the roots of their disunity. Now they worked on the same site to control water. Together they dismantled the "feud dam" and the "trouble lock" and built a bridge they named Friendship. "Liu Shao-chi's counter-revolutionary revisionist line separated us. We must remember the lesson well. Only by uniting as Chairman Mao teaches can we turn water trouble into water benefit."

This spirit of subordinating local interests to the revolutionary interest of the whole found expression on all the worksites. According to the original plan, the canal would be navigable only within Anhwei Province. But Anhwei's revolutionary leading cadres and engineers gave long consideration to the needs of building socialism. In the interests of all three provinces, they decided to extend the navigation all the way to Hungtse Lake. They moved the distribution gate, originally planned for Anhwei Province, to Szuhung County in Kiangsu Province and named it "Unity Lock". The extension brought Szuhung's tens of thousands of *mu* of farmland under irrigation and linked water communications between northern Kiangsu and northern Anhwei, helping to expand industry and agriculture in both provinces.

Now the earthwork is completed on the 250-kilometre new waterway formed by the To and New Pien Rivers which flow through three provinces. The builders spelled out a huge slogan on the dyke with stones: "A canal that links the fish-and-water ties of three provinces."

In 1969, in spite of abnormally heavy spring and summer rains, the peasants of the entire Huaipei Plain brought in a good harvest.

The 1970 grain production of Huaipei Plain was 31.3 per cent over that of 1969, or 3 times the pre-liberation figure and the highest recorded in its history. The *per-mu* yield of many communes and production brigades exceeded 500 kilogrammes and a still bigger harvest is expected in 1971.

by Chien Wen

Conquering the Haiho

ON the map of China, the Haiho River is only a short blue line, a stretch of 70 kilometres from Tientsin to the Pohai Sea. But five big rivers with several hundred tributaries pour into its upper and middle reaches. All these must flow through the Haiho into the sea. This is the Haiho River system — the biggest in north China. It begins in the Taihang Mountains in the west and passes through an area of 265,000 square kilometres, most of which is in Hopei Province.

Most of the tributaries in the basin are short and swift. During the summer and autumn rains the rivers rise rapidly and pour down from the mountainous areas into the Haiho River at 10,000 cubic metres per second. But in the past, the Haiho could take little more than 1,000 cubic metres per second, and the waters burst through the plain in great floods. In the spring when there is little rain, many of the tributaries dried up and drought followed. Floods, waterlogging, drought and alkalization due to

waterlogging seriously damaged agriculture and Hopei Province could not produce enough grain for itself.

After liberation, the people in the Haiho River basin dug some new river outlets and built many reservoirs. This helped drain floodwaters and prevent waterlogging. When one of the biggest floods in history came in 1963, it reduced losses. That autumn, Chairman Mao issued the call, **“The Haiho River must be brought under permanent control!”** His call expressed the hopes the people of the basin had cherished for hundreds of years. A stirring and gigantic struggle to tame the Haiho forever began.

Battling for seven years in the spirit of **“self-reliance and hard struggle”**, the people of Hopei practically brought the southern and western parts of the Haiho system under control by the end of 1970. They dug 19 new river outlets totalling 1,600 kilometres and constructed 14 large dykes totalling 1,400 kilometres. These projects were connected with the Taihang Mountains in the west and opened into the Pohai Sea in the east. Taking in and channeling 13,000 cubic metres of water per second, the new waterway system protects 3.3 million hectares of fields from flood and waterlogging. They built or enlarged 1,400 reservoirs in the mountain areas to check floodwaters and store water which accumulates during the winter. On the plain, thousands of pumping stations and 200,000 wells supplement a great waterway network. The goal of one hectare of irrigated land per 15 persons has been reached in Hopei Province. The area of alkaline land has been cut to less than half. Now low-lying lands also produce good crops.

Why could such victories be won? The comrades of the Haiho Control Project Headquarters answered: Chairman Mao's great call went right to the people's hearts and turned into a great material force. **Trust the masses, rely on them and respect their initiative** — Chairman Mao's revolutionary line in all work. As soon as the people of Hopei became clear on the aim of water control, their enthusiasm and drive became boundless.

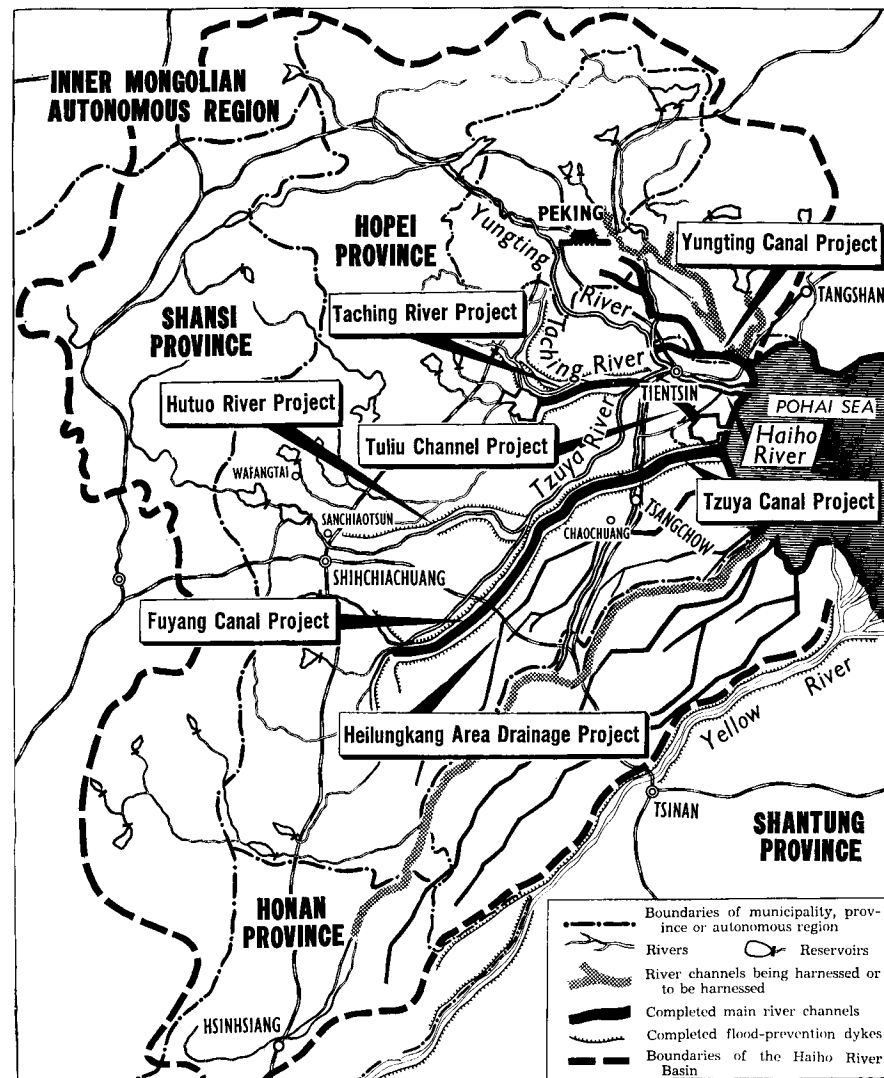
■ Front Line Heroes

The people plunged into a "people's war". Controlling the main rivers became "the front line". Projects to form a background network in the region were called "the home front". Under the leadership of the provincial revolutionary committee, the Haiho Control Project Headquarters organized the work. Three hundred thousand to 500,000 workers, mainly commune members, but also some industrial workers and cadres, worked as the main force every winter and spring to harness one or two major rivers.

In 1971 summer, "the front line" had already moved from the southern part of the system to four main rivers in the north. The 60-kilometre Yungting Canal was already basically completed. This canal connects the Yungting River in the north suburbs of Tientsin with the sea, diverts the floodwaters and removes the threat of the Yungting River flooding Tientsin and the Peking-Shanhaikuan Railway.

July 1 the Yungting Canal worksite near the sea was alive with activity. The workers were celebrating the

MAP OF THE HAIHO RIVER CONTROL PROJECT



50th anniversary of the birth of the Chinese Communist Party by opening a railway bridge to traffic. The bridge builders described a battle with nature which had taken place only a few days ago. Just as they were pouring concrete for the last two piers, the skies darkened, rain poured down and a ninth-grade gale swept up sand and stones in a fierce storm. Refusing to be stopped, they finished pouring the two piers in the storm. Every one of the workers was covered with mud and their faces were swollen from the beating by sand and stones. In answer to admiration they said quietly, "This is nothing compared to how the Huanghua County work force dug their canal."

After the canal was finished, most of the workers had gone back to their communes. The Huanghua County work force appeared right on the shores of the Pohai Sea. They were 3,000-strong, just arrived from the Yungting Canal. A 46-kilometre drainage channel to the sea had to be dug before the flood season to divert the water in their home county of Huanghua and neighbouring Chinghsien and Chinghai Counties.

They were working on the part opening into the sea. Whenever it rained, everything turned into mud and carts could not be pushed through it. But, they said, these conditions were still better than what they had had to deal with on the new Yungting Canal. That was last February. Their worksite was a 500-metre by 120-metre section of a reed lake. It was bitter cold. The mud and reed roots formed a frozen mat two feet thick, hard as reinforced concrete. They beat on spikes with 20-pound hammers and ruined 50 hammers and 130 spikes, but could not break through. Finally, they rigged up two timbers and hung a 100-pound rock on it which they let

down to beat on the spikes. After eight days, they finally broke the surface.

“Where did you get such drive?” Someone asked Ma Lien-chih, a 25-year-old member of the team. He had joined the river-taming army when he was 19 and had worked on eight major projects. “Because we all understand the importance of permanently controlling the Haiho system as pointed out by Chairman Mao,” he answered. “Once it’s under control, Hopei Province’s grain problem will be solved. Peking, Tientsin and the north-south rail-ways will be safe from floods. This is an important part of socialist revolution and construction.”

Before starting any project, he went on, a Mao Tsetung Thought study class is held on the worksite. They study the meaning and significance of Chairman Mao’s directive about permanently controlling the Haiho. In the home villages of the workers, the leaders do publicity work with all families. People volunteer for every project. When the volunteers leave, the warm sendoff is the kind given to young men going into the People’s Liberation Army.

“Of course,” he said, “there were also some people who were not happy to see us control the Haiho because they wanted to sabotage socialism and restore capitalism. Liu Shao-chi and his gang of counter-revolutionaries were afraid of the masses uniting for the job and advocated that counties, townships and villages harness their own waters. ‘Each piece of land to each piece of sky’ was the way they put it. When we found out that they had said ‘We’re determined to let Hopei Province be waterlogged for ten years’, we were furious,” Ma Lien-chih exclaimed.

“The Liu Shao-chi traitors are no different from the Kuomintang reactionaries. Whether or not we permanently control the Haiho system is a question of whether or not we’re carrying out Chairman Mao’s proletarian revolutionary line — taking the socialist road or the capitalist road.”

It was this revolutionary consciousness of the masses that changed into a material force so powerful that it literally moved mountains and rivers. These peasant-workers battled seven years without fear of hard work or fatigue and completed 1,500 million cubic metres of earth-work! In the winter of 1965, for example, nearly a half million workers from 84 counties concentrated on the most seriously plagued part of the Haiho River basin, the Heilungkang area. In the first winter and spring they built a drainage system and dredged nine major rivers, including the Chang and Sha Rivers and over thirty tributaries. Then, moving northward in the following years, they put two major rivers, the Tzuya River and Taching River, and their main tributaries, under control. They dug the Tzuya Canal, 143 kilometres long and 2.5 kilometres wide, and the 133 kilometre-long Fuyang Canal, at the upper reaches of the Tzuya Canal. Thus the floodwaters of this area which suffers most from rain-storms now pour into the sea through the Tzuya Canal at 9,000 cubic metres per second.

Working together, peasants and technical workers built 1,400 bridges and sluices on the main rivers. The peasants learned from the technical workers as they worked and quickly became skilled helpers. Uniting and pooling their wisdom, peasants and workers thought of many ways to build more bridges and sluices faster, better

and more economically. For example, according to winter construction practice, outdoor work cannot be done without general steam heating. But the Haiho heroes dared to think and act. They built a reed wall around the worksite to fend off the wind and then kept the temperature warm enough for construction by placing many little stoves made from old kerosene drums on the scaffoldings. With improvised methods such as this, many projects were completed ahead of schedule. Concrete was cast in clay forms instead of wood. Huge pieces of reinforced concrete replaced steel, saving large amounts of capital and material.

■ Home Front Heroes

South of Tientsin on the Haiho River is the Heilung-kang area, which includes the 47 counties and cities on the middle and southern Hopei plain, one-third of the province's cultivated land. Plagued by both flood and drought in the past, this low-lying land always lacked grain. Today it is self-sufficient in grain.

While several hundred thousand "main force" people were working on the "front line" major rivers, several million commune members cooperated by building a network of waterworks in the regions around them. Usually by the time work on a major river was completed, the land on both sides had also been transformed — the river connected with canals, canals with ditches, a network of thousands of canals, sluices, gates and ditches leading directly to the fields.

Today the "main forces" have left the Heilung-kang area, where the major rivers have been harnessed, and have moved northward. But the peasants in these southern regions are still working on their network, expanding the areas served by water conservation projects and raising the efficiency of flood and drought prevention. A neat drainage and irrigation system now covers the entire Heilung-kang area. Tractor roads along channels have been paved, trees planted along roads and dykes, and deep drainage ditches have been dug on alkaline soil. Earth removed in projects has been used to build terraced fields. These are all comprehensive utilization measures suited to local conditions, basically eliminating the threat of flood and waterlogging in the area, and decreasing the area of alkaline land by half.

The annual rainfall in Hopei Province is small, so the water sources of the Haiho River region are insufficient. In the past three years the Heilung-kang people launched a large-scale battle to search out underground water sources and dig wells. Most of the water down to 150 metres is bitter and alkaline. So they dug wells as deep as 500 metres to pump up the good quality sweet water.

The leader of the drilling team of Wuyi County was a Party committee secretary of a commune. He said his team had 24 drill rigs, most of them made from old rigs discarded by geology teams in distant provinces and autonomous regions. The 500-member team had several veteran workers who had come from geology teams, but most of them were young peasants chosen by their communes. Since its founding in 1969 the team has dug over 400 wells. Each can irrigate 20 hectares of land. The diesel motors running the pumps can also be attached

to farm machinery. The demand for wells is urgent. Two hundred agricultural production brigades have already signed up to have theirs dug.

The commune members' enthusiasm for digging wells inspired local commune and county factories to make drill rigs in the spirit of self-reliance. The metal works of Hengshui County, for example, had only one 100-kilogramme capacity smelting furnace and two belt-driven lathes. In one month in the spring of 1970, the workers enlarged their furnace and blower and raised the tool carriers on the lathes so that they could cast and process 250-kilogramme parts needed for a drill rig. Thus they succeeded in making their first batch. Today their metal works has grown to over 400 workers turning out light, convenient, economical drill rigs. Many small local factories now make the rigs or parts. Over 60,000 wells have been dug. An area of little irrigated land now contains over 730,000 hectares of irrigated fields.

Taking a train to the west, one arrives at Shihchia-chuang, then travels by car into the Taihang Mountains. High on one mountaintop are these words formed with stones: **"The Haiho River must be brought under permanent control!"**

To help achieve this, the mountain people are working on large-scale afforestation, water control and soil conservation, dyke and field-terracing projects. They plant trees, build stone dykes, terraced fields and reservoirs. During the winter and spring of 1970-71 alone they planted 130,000 hectares of trees and built 400 reservoirs. There are only 800 people of all ages in the Wafangtai Brigade deep in the Taihang Mountains. Yet

in the past six years they have turned 600 hectares of barren mountainsides green and planted 2,500,000 trees, an average of 3,000 trees per person.

■ United as One

"Permanently control the Haiho River!" inspires the fighting spirit of the people of Hopei Province. Workers in every field and profession unite and help each other to control the waters. In true communist spirit, counties outside the Haiho River basin send peasants to help the main projects. Regional and county factories throughout the province give priority to producing thousands of machines for irrigation and drainage. Finance, commerce and other departments set up service centres at the worksites and guarantee the supply of fresh vegetables and other foods. All counties that send commune members to work on the sites also send medical teams. County film projection units tour the worksites regularly and cultural troupes often go to perform for the workers.

Since last winter and spring, the people of Peking and Tientsin have also plunged into the battle, closely cooperating with the Hopei Province water conservation "army". Working together for 120 days, they finished digging the Yungting Canal, the Peking sewage drainage channel and a flood and waterlogging prevention project in Peking's outskirts.

The battle for permanent control of the Haiho River system is still going on. But seven years of arduous struggle is already showing striking results. Hopei is no longer insufficient in grain, but has been self-sufficient

for the past three years. The 1971 summer crops were again good. The Haiho River battle has steeled the people of Hopei and brought an understanding of the great power produced by unity based on Marxism-Leninism-Mao Tsetung Thought.

by Chung Chien

Water Conservation on the Chianghan Plain

THE Chianghan Plain lies between the middle reaches of the Yangtse River and the lower reaches of the Han River in central Hupeh Province. Criss-crossed with waterways and studded with lakes, its fertile soil yields abundant grain and cotton.

But once it was under the constant threat of flood. The Yangtse, rolling down from the highlands in the west, drops sharply at the Chianghan Plain to follow a narrow winding course. Slowed down, the current dumped its silt along this stretch and raised the bed. In late summer and early autumn, the river often flooded. The Han River roars out of the mountains north of the plain, passes through the eastern part and merges with the Yangtse. It was more a menace than a benefit.

Eight million people live on the plain. In the 22 years since liberation they have built extensive water

conservation projects to harness the water, guaranteeing stable harvests on 860,000 hectares of farmland in spite of drought and waterlogging. Today the plain grows twice as much grain and seven times as much cotton as it did before liberation.

How did this miracle come about?

Most of the Chiangnan Plain lies within the Chingchow Special Administrative Area. Jao Min-tai, the area's revolutionary committee vice-chairman, who has been in charge of water conservation for many years, gives the answer.

"We owe our achievements in water control first of all to Chairman Mao," the veteran cadre said. "For it was he who led us to win liberation and set up the superb socialist system. This was the fundamental guarantee of our achievements."

He described the disasters of pre-liberation floods. The Kuomintang reactionaries held power for 22 years and did nothing to maintain the dykes along the Yangtse and Han Rivers. In 1931, the Yangtse poured through the dykes, killing 20,000 people on the Chiangnan Plain and leaving 1,700,000 homeless.

After liberation the People's Government at once mapped out comprehensive long-range plans to control water. On the Chiangnan Plain, the first stage of the work was to "close the gate" — control the water as it entered the plain. This meant widening and heightening the dykes of the Yangtse and Han Rivers and strengthening the dangerous sections.

This done, the main effort of the over-all programme was shifted in 1956 to make water conservation serve farm production. The different water systems began to be harnessed to local conditions.

Since 1958, guided by Chairman Mao's General Line of **going all out, aiming high and achieving greater, faster, better and more economical results in building socialism**, the Chiangnan people began making multi-purpose utilization of the water resources not only for farming, forestry, livestock raising, sidelines and fisheries, but for hydro-electric power, communications and transportation.

"Every success we had in water conservation was a victory of Chairman Mao's revolutionary line over Liu Shao-chi's revisionist line," Jao Min-tai continued. "It was a struggle over whether to rely on the masses and do it self-reliantly or rely on a small number of specialists and ask the state for help." The Chiangnan people stuck to Chairman Mao's teachings on self-reliance, hard work and the launching of mass movements to tap the full potential of the people's collective wisdom and strength.

Every year since 1952, a million peasant builders marched to water conservation sites during the off season. With 600 million cubic metres of earth they raised and widened 4,000 kilometres of dykes along the Yangtse and Han Rivers. They dug 5,000 kilometres of trunk canals and built 300 reservoirs and thousands of waterlocks. In 18 years the people completed 400,000 water conservation projects on the Chiangnan Plain. A few of the key projects were financed by the state, but

the vast majority were financed and built by the local people themselves.

■ The Masses — the Real Heroes

All the big key projects were built by large-scale “people’s wars” with hundreds of thousands taking part. Not far from Chingchow the 180-kilometre Ching River dyke at Shashih guards the north bank of the Yangtse, the starting point of the dangerous middle section of the Yangtse, known locally as the Ching River. Before liberation the dyke breached about every two years. Today it holds back water several metres higher than the land. It has never breached since liberation.

Ferrying across to the south bank one comes to the Ching River flood diversion area, a project Chairman Mao authorized in 1952. In unusually big floods, the excess flow of the Yangtse is diverted into the detention basin here to relieve the pressure on the main dyke. The kilometre-long entrance dam sits on the basin’s northern inlet like a huge dragon. In 1954, two years after the scheme was completed, the Yangtse rose in the biggest flood in a century. A roaring current of 8,000 cubic metres of water per second was diverted safely through the dam’s 54 sluice-gates into the detention basin.

Monuments at both ends of the entrance dam bear Chairman Mao’s inscription, written in 1952: **“Strive for the successful completion of the Ching River flood diversion project in the interests of the people!”** Inspired by these words, 300,000 workers, peasants and soldiers finished the entire project — entrance dam, distribution

gates, detention basin and surrounding dykes — in only 75 days that year, before the Yangtse’s summer flood season.

In the Chingchow area the Red Guard Reservoir is a man-made lake carved between many mountains. It takes two and a half hours by steamboat to reach the big dam.

The dam was built as the big leap forward began in 1958. That winter the five counties which were to benefit from the project sent 130,000 commune members to build the dam. Liu Shao-chi’s agents in the province had ordered some technical “authorities” to design a ferro-concrete dam which called for tremendous quantities of cement and rolled steel and would take at least ten years to build. The peasant builders were furious. “Chairman Mao teaches us to build socialism with greater, faster, better and more economical results,” they said. “But these people are trying to force a ‘modern’ design on us which costs a fortune. Nothing doing!”

Consulting with the revolutionary cadres and engineers and drawing upon their own rich experience in water control, they proposed a dam of earth, sand and stone, materials that were plentiful locally. They turned their own design into reality in just three years and completed the rest of the irrigation system in another three winters. With the heroism of the proletariat they drilled and blasted five tunnels, split open 100 hills, filled in 200 dips, dug 4,500 kilometres of waterways, and built 1,000 dams, sluice-gates, aqueducts and bridges. In 1963 the reservoir water began flowing through a web of

canals around peaks and hilly areas to irrigate the 173,000 hectares of land in the five counties.

■ Putting Water to Full Use

The Red Guard Reservoir not only prevents flood and irrigates farmland but serves a variety of other purposes. Eleven small hydro-electric stations are in operation and two bigger ones will soon be finished. Transport junks and power boats dot the huge reservoir. Its sapphire-blue waters teem with fish. Fruit and other trees cover its islands and surrounding hills.

In the Four Lakes area in the centre of the plain, a "people's war" has been going on for ten years to make full use of the water resources. This low-lying region was once seriously waterlogged. In the winter of 1959-60, 240,000 commune members from the area's five counties dug four trunk canals totalling 390 kilometres, linking the four lakes with the Yangtse River to the south. Along the canals they built many big waterlocks and electric irrigation and drainage stations. During the rainy season, excess water is drained and diverted through the trunk canals into the Yangtse. During dry spells the Yangtse's water can be brought in to irrigate the land. This guarantees stable harvests on 260,000 hectares.

Draining off the excess water of the lakes made 90,000 hectares of fertile land available. It is now cultivated by 13 state farms. These farms grow rice, wheat, cotton, raise livestock and plant forests. All the scattered ponds are put to full use for growing water chestnuts, lotus roots and breeding fish and ducks. Where winding

and silted waterways made water transport difficult before, junks and steamboats up to 300 tons now pass up and down the trunk canals, leaving or entering the Yangtse through the boat lock at the outlet.

■ Self-Reliance Is the Base

Some of the smaller ones were built by production brigades, communes and counties on the principle of self-reliance and immediate benefit.

Mienyang County in the eastern part of the plain raised 80 per cent of its water conservation investments locally. Since 1958, its peasants have widened and raised 460 kilometres of dykes, built 11 waterlocks and 1,000 auxiliary locks, dug or dredged 800 kilometres of irrigation and drainage channels. Once a place where nine crops out of ten failed, today Mienyang is a granary with guaranteed harvests.

The county's twin electrical irrigation and drainage stations, the "East Wind" and the "Sunny Side", serving 8,000 hectares of farmland, were built jointly by six communes with their own efforts. The technicians running the stations are commune members trained during construction.

The six communes began a mass movement in early 1967 to raise money for the stations. Production teams, brigades and communes contributed funds. Commune members made personal donations. Yen Tse-tsao, a poor peasant who knew the bitterness of the old society, contributed 100 copies of Chairman Mao's *The Foolish Old Man Who Removed the Mountains* to spread Chairman

Mao's thinking that persistence means victory. Enough funds were collected within a few days. Mass wisdom and effort finished the stations in a year and a half, and this ensured harvests on 7,300 hectares.

The 10,000 peasant specialists trained in actual practice on the Chiangnan Plain are today its main technical force in water conservation.

■ For Greater Victories

The Great Proletarian Cultural Revolution pushed the masses' enthusiasm for socialism to a new high. Every year during the last few years since it began, between one and two million peasants sweated on more than 100 worksites to change their mountains and rivers.

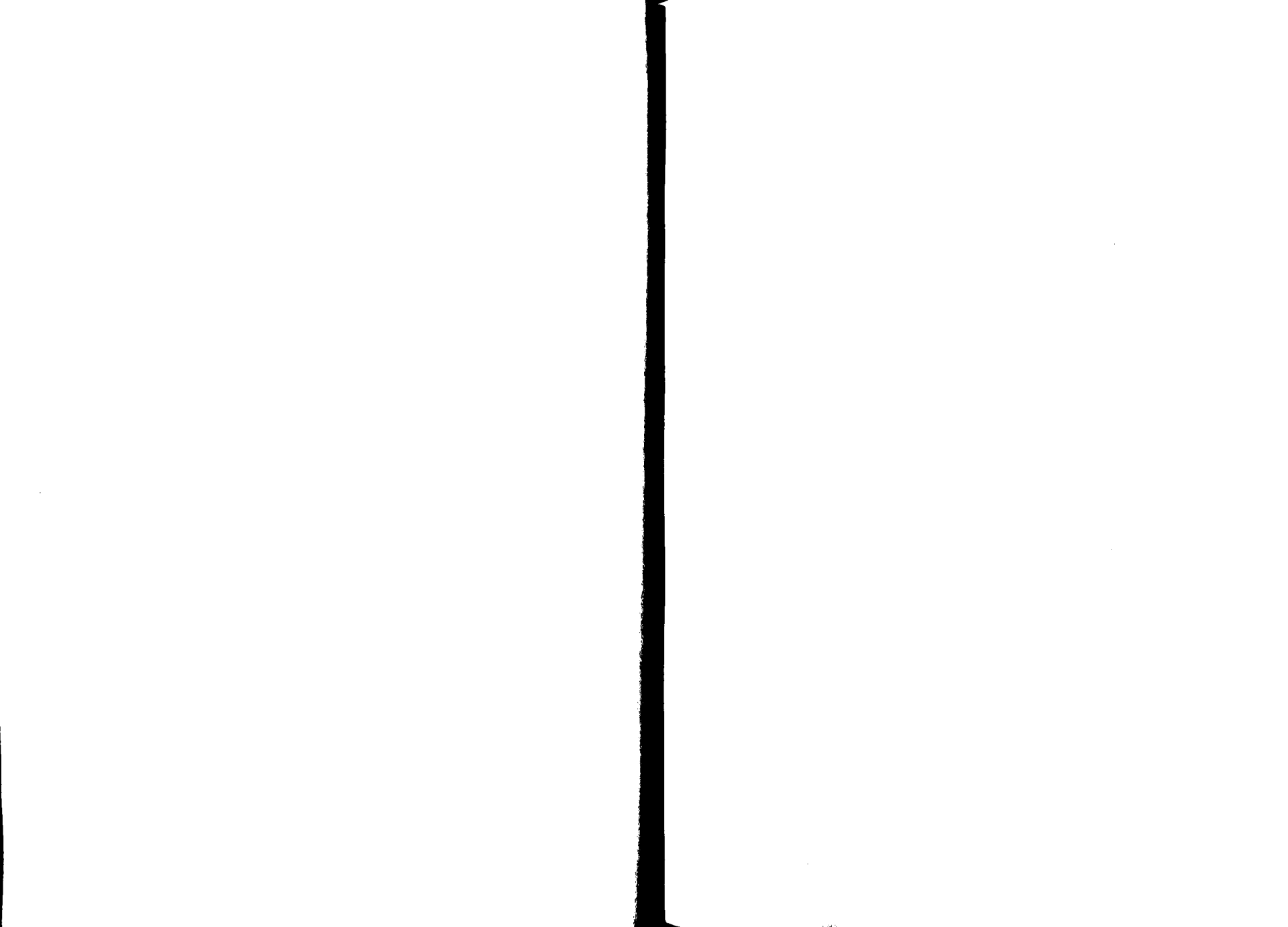
The 600,000-strong "army" harnessing the water system north of the Han River in the eastern part of the plain has won decisive victory.

The terrain of this region slopes to the south. With the rains, the land on the Han's lower reaches became waterlogged. The first stage of the project, completed last June, was a 100-kilometre canal through five counties, linking main waterways and lakes and diverting excess water into the Yangtze. Named the Hanpei River, the canal eliminated water disasters from an area 4,000 kilometres square, including 70,000 hectares of farmland.

Five hundred thousand local commune members volunteered for the project. Communes south of the river, though they would not benefit from it, in true communist spirit sent 100,000 people to help.

There were many difficult and dangerous sections. At one place the canal had to cut across a big lake. This meant long dykes to keep the water flowing straight through. To build the dykes it was first necessary to erect breakwaters. For three days 1,200 people poured earth into the lake, but all of it was washed away by waves. Commune cadre Huang Mu-nien and 200 strapping men carried woven grass bags filled with mud into the ice-cold water two metres deep until the breakwaters were secure. In the communist spirit which fears neither hardship nor death in the service of the people, the 600,000 peasant builders completed the canal in six months.

The second stage of the project has begun. One can imagine how the finished project would look — electrical irrigation and drainage stations, waterlocks, drainage gates, bridges, reservoirs, ponds, embankments, check-boards of canals with produce-laden boats, cars speeding on dyke roads, and 13,000 hectares of drained lake shores turned into rich farmland.



中国几条主要河流的治理

•

外文出版社出版（北京）
1972年（32开）第一版
编号：（英）12050—29
00028
12—E—1259P

